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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,813	02/25/2004	Shunpei Yamazaki	0553-0399	5131

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EXAMINER	
NGUYEN, KEVIN M	
ART UNIT	**PAPER NUMBER**
2629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/786,813	YAMAZAKI ET AL.	
	Examiner	Art Unit	
	Nguyen M. Kevin	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Arguments

Claims 1-18 are not amended, and claims 19-27 are newly added. Thus, claims 1-27 are pending in this application.

Applicant's arguments see pages 9-10, filed 11/27/2007, with respect to the rejection(s) of claim(s) 1-18 under the previous rejection have been fully considered and are not persuasive because the reasons are replied below. With respect to the new claim(s) 19-27 have been fully considered and are not persuasive. The amendment of new claims necessitates a new ground of rejection(s) presented below.

With respect to claim 1 recited "a plurality first light-emitting element for emitting a red color comprising a transparent first electrode, a first layer including an organic compound and touching the first electrode, and a transparent second electrode touching the first layer including the organic compound," the applicant argues that first electrode 18 as taught by Cok is not a transparent second electrode. This is not found to be persuasive. The limitation "first" in the transparent first electrode and the limitation "second" in the transparent second electrode are the broad terms of the limitation. The transparent second electrode would consider either a transparent bottom electrode, a transparent first electrode, or a transparent lower electrode. In the alternate embodiment, col. 3, lines 64-65 of Cok discloses the first electrode layer 18 is transparent with respect to the red pixel 41R (corresponding to a first light-emitting element as claimed). Col. 4, lines 14-17 of Cok further discloses a filter layer 41R, 41G, and 41B as described above is provided between the reflector layer 50 and the transparent first electrode 18. Based on the finding of facts, Cok discloses a portion of the transparent lower electrode 18 with respect to the sub pixel 41R as corresponding to the transparent second electrode as claimed.

Similarly, with respect to claim 1 recited "a transparent fourth electrode" and "a transparent sixth electrode," the applicant argues that Cok does not teach a transparent fourth electrode and a transparent sixth electrode. These are not found to be persuasive. The limitation "fourth" in the transparent fourth electrode and the limitation "sixth" in the transparent sixth electrode are the broad terms of the limitation. The transparent fourth electrode and the transparent sixth electrode would consider either a transparent bottom electrode, or a transparent lower electrode. In particular, Cok discloses a corresponding portion of the transparent lower electrode 18 with respect to the sub pixel 41G as corresponding to the transparent fourth electrode as claimed. Cok discloses a corresponding portion of the transparent lower electrode 18 with respect to the sub pixel 41B as corresponding to the transparent sixth electrode as claimed.

Similar to claims 2 and 13 recited "a transparent second electrode," the applicant argues that Cok does not teach a transparent second electrode. These are not found to be persuasive. Col. 2, line 61 of Cok discloses a corresponding portion of the transparent upper electrode 30 with respect to the sub pixel 41R as corresponding to the transparent second electrode as claimed. Claims 1, 2 and 13 stand rejection, and those claims depend on claims 1, 2, and 13 stand rejection, too.

For these reasons, the rejection of claims 1-18 has been maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Cok et al (US 6,911,772) hereinafter Cok.

2. As to **claim 1**, figure 3, col. 3, lines 40-48, col. 5, lines 64-67, and col. 6, lines 21-40 of **Cok** teaches a light-emitting device comprising:

a plurality first light-emitting element for emitting a red color comprising a transparent first electrode, a first layer including an organic compound and touching the first electrode, and a transparent second electrode touching the first layer including the organic compound (elements 24R, 19R, 30 and 18);

a second light-emitting element for emitting a green color comprising a transparent third electrode, a second layer including an organic compound and touching the third electrode, and a transparent fourth electrode touching the second layer including the organic compound (elements 24G, 19G, 30 and 18); and

a third light-emitting element for emitting a blue color comprising a transparent fifth electrode, a third layer including an organic compound and touching the fifth electrode, and a transparent sixth electrode touching the third layer including the organic compound (elements 24B, 19B, 30 and 18),

wherein luminescence passing the first electrode and luminescence passing the second electrode are the same in a color coordinate (elements 24R, 30 and 18),

wherein luminescence passing the third electrode and luminescence passing the fourth electrode are the same in the color coordinate (elements 24G, 30 and 18), and

wherein luminescence passing the fifth electrode and luminescence passing the sixth electrode are the same in the color coordinate (elements 24B, 30 and 18).

3. As to **claim 2**, figure 3, col. 3, lines 40-48, col. 4, lines 23-43, col. 5, lines 64-67, and col. 6, lines 21-40 of **Cok** teaches a light-emitting device comprising:

a pixel portion having a plurality of light-emitting elements of white having a transparent first electrode, a layer including an organic compound and touching the first electrode, and a transparent second electrode touching the layer including the organic compound (elements RGB, 24R, 24G, 24B, 19R, 30 and 18);

two color filters which sandwich the light-emitting element (elements 40, 41 and 19); and

wherein transmitted light of three colors transmitted through each the two color filters form approximately the same triangles in a color coordinate as for both luminescence passing a first electrode and luminescence passing a second electrode (elements 24, RGB, 40, 41, the color gamut, 30 and 18; red, green, and blue mix to generate white).

As to claim 3, prior art of figure 5 of Cok conventionally discloses a light-emitting device according to claim 1, wherein one of the first electrode and the second electrode is a cathode and the other is an anode of the first light-emitting element, wherein one of the third electrode and the fourth electrode is a cathode and the other is an anode of the second light-emitting element, and wherein one of the fifth electrode and the sixth electrode is a cathode and the other is an anode of the third light-emitting element (elements 113, 103 and 109).

As to claim 4, prior art of figure 5 of Cok conventionally discloses a light-emitting device according to claim 2, wherein one of the first electrode and the second electrode is a cathode and

the other is an anode of a light-emitting element layer including an organic compound (elements 113, 103 and 109).

As to claim 5, Cok teaches a light-emitting device according to claim 1, wherein number of layers to be passed is different between light transmitted through the first electrode and light transmitted through the second electrode, wherein number of layers to be passed is different between light transmitted through the third electrode and light transmitted through the fourth electrode, wherein number of layers to be passed is different between light, transmitted through the fifth electrode and light transmitted through the sixth electrode (elements 19B, 19B, 24B, 30, and 18, see col. 4, lines 23-43, col. 5, lines 64-67, and col. 6, lines 21-40).

As to claim 6, Cok teaches a light-emitting device according to claim 2, wherein number of layers to be passed is different between light transmitted through the first electrode and light transmitted through the second electrode (elements 19B, 19B, 24B, 30 and 18, see col. 4, lines 23-43).

As to claim 7, Cok teaches a light-emitting device according to claims 1, wherein a TFT is connected to the first electrode or the second electrode, wherein a TFT is connected to the third electrode or the fourth electrode, and wherein a TFT is connected to the fifth electrode or the sixth electrode (elements 14, 30 and 18, fig. 3, col. 3, lines 6-11).

As to claim 8, Cok teaches a light-emitting device according to claims 1, wherein a TFT is connected to the first electrode or the second electrode (elements 14, 30 and 18, fig. 3, col. 3, lines 6-11).

As to claim 9, Cok teaches a light-emitting device according to claim 1, wherein one of the first electrode and the second electrode is a transparent conductive film, the other is a metal

thin film transmitting light, wherein one of the third electrode and the fourth electrode is a transparent conductive film, and the other is a metal thin film transmitting light, and wherein one of the fifth electrode and the sixth electrode is a transparent conductive film, and the other is a metal thin film transmitting light (elements 30, 18, 50 and 24, see col. 3, line 64 to col. 4, line 20).

As to claim 10, Cok teaches a light-emitting device according to claim 2, wherein one of the first electrode and the second electrode is a transparent conductive film, other one of the first electrode and the second electrode is a metal thin film transmitting light (elements 30, 18, 50 and 24, see col. 3, line 64 to col. 4, line 20).

As to claim 11, Cok teaches an electronic appliance including the light-emitting device according to claim 1, wherein the light-emitting device is selected from the group consisting of a video camera, a digital camera, a car navigation, a personal computer, or a portable information terminal (Charge Coupled Imaging Devices, col. 3, lines 20-23).

As to claim 12, Cok teaches an electronic appliance including the light-emitting device according to claim 2, wherein the light-emitting device is selected from the group consisting of a video camera, a digital camera, a car navigation, a personal computer, or a portable information terminal (Charge Coupled Imaging Devices, col. 3, lines 20-23).

4. As to **claim 13**, figure 3, col. 3, lines 40-48, col. 4, lines 23-43, col. 5, lines 64-67, and col. 6, lines 21-40 of **Cok** teaches a light-emitting device comprising:

a pixel portion having a plurality of light-emitting elements of white having a transparent first electrode, a layer including an organic compound and touching the first electrode, and a transparent second electrode touching the layer including the organic compound;

two color filters which sandwich the light-emitting element of white (elements RGB, 24R, 24G, 24B, 30, 18, 19R, 40 and 41; red, green, and blue mix to generate white).

Claim 14 shares the same limitations as those of claim 4 and therefore the rationale for rejection will be the same.

Claim 15 shares the same limitations as those of claim 6 and therefore the rationale for rejection will be the same.

Claim 16 shares the same limitations as those of claim 8 and therefore the rationale for rejection will be the same.

Claim 17 shares the same limitations as those of claim 10 and therefore the rationale for rejection will be the same.

Claim 18 shares the same limitations as those of claim 12 and therefore the rationale for rejection will be the same.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cok in view of Urabe et al. (US 6,614,174, Urabe).

2. As to claim 19, Cok teaches all of the limitations of claim 1, except for the light emitting device according to claim 3, wherein the cathode includes Ag, and wherein a transparent conductive layer is formed over the cathode.

Col. 1, lines 31-34 of Urabe reviews the cathode K is made of an alloy of aluminum (Al) and silver (Ag). And figure 8, col. 8, lines 57-67 of Urabe teaches an organic light emitting device comprising a cathode (11) is made of silver (Ag) which is formed below a transparent conductive layer (12).

Claim 20 shares the same limitations as those of claim 19 and therefore the rationale for rejection will be the same.

Claim 21 shares the same limitations as those of claim 19 and therefore the rationale for rejection will be the same.

In the alternate embodiment, Cok discloses the cathode used in this invention is comprised of nearly any conductive material, col. 9, lines 37-38. Urabe's benefit provides a prescribed shape, which is obtained and performed to decrease short circuits between the cathode K and the anode A, col. 7, lines 44-57. Urabe's benefit further is used in a display having large size and high resolution, col. 10, lines 10-15. Thus, it would have been obvious to a person of ordinary skill in the art to apply Urabe to Cok to achieve the predictable result. Using the known technique of Urabe would have been obvious to one of ordinary skill.

3. Claims 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cok in view of Urabe as applied to claims 1, 2, and 13 above, and further in view of Katsumoto et al. (US 2003/0170423, Katsumoto).

As to claim 22, Cok teaches all of the limitations, except for the light emitting device according to claim 19, wherein a thickness of the cathode is within a range of 6nm to 10nm. Figure 8, col. 8, line 57 through col. 9, line 8 of Urabe teaches an organic light emitting device comprising a cathode (11) is made of silver (Ag) with a thickness of 10 nm. In the alternate

embodiment, Cok discloses the cathode used in this invention is comprised of nearly any conductive material, col. 9, lines 37-38. Urabe's benefit have a prescribed shape could be obtained to be performed to decrease short circuits between the cathode K and the anode A, col. 7, lines 44-57. Urabe's benefit further is used in a display having large size and high resolution, col. 10, lines 10-15. Thus, it would have been obvious to a person of ordinary skill in the art to apply Urabe to Cok to achieve the predictable result. Using the known technique of Urabe would have been obvious to one of ordinary skill.

Cok and Urabe teach all of the limitations, except for a thickness of the transparent conductive layer is within a range of 240 nm to 290 nm. Katsumoto teaches an organic light emitting diode device which includes a thickness of a transparent conductive layer is preferably from 30 nm to 500 nm, paragraph 140.

Claim 23 shares the same limitations as those of claim 22 and therefore the rationale for rejection will be the same.

Claim 24 shares the same limitations as those of claim 22 and therefore the rationale for rejection will be the same.

In the alternate embodiment, Cok discloses the cathode used in this invention is comprised of nearly any conductive material, col. 9, lines 37-38. Urabe's benefit provides a prescribed shape, which is obtained and performed a transparent conducting film that showed good conductively by forming as a film at a room temperature, which is used as the transparent conducting layer 12, col. 8, line 66 to col. 9, line 2. Urabe's benefit further is used in a display having large size and high resolution, col. 10, lines 10-15. Katsumoto's benefit provides a prescribed shape of the transparent conductive layer to be good conductively, paragraph 140.

Thus, it would have been obvious to a person of ordinary skill in the art to apply Katsumoto to Cok and Urabe to achieve the predictable result. Using the known technique of Katsumoto would have been obvious to one of ordinary skill.

As to claim 25, Cok teaches all of the limitations, except for the light emitting device according to claim 19, wherein a thickness of the cathode is within a range of 6nm to 10nm. Figure 8, col. 8, line 57 through col. 9, line 8 of Urabe teaches an organic light emitting device comprising a cathode (11) is made of silver (Ag) with a thickness of 10 nm. In the alternate embodiment, Cok discloses the cathode used in this invention is comprised of nearly any conductive material, col. 9, lines 37-38. Urabe's benefit provides a prescribed shape, which is obtained and performed to decrease short circuits between the cathode K and the anode A, col. 7, lines 44-57. Urabe's benefit further is used in a display having large size and high resolution, col. 10, lines 10-15. Thus, it would have been obvious to a person of ordinary skill in the art to apply Urabe to Cok to achieve the predictable result. Using the known technique of Urabe would have been obvious to one of ordinary skill.

Cok and Urabe teach all of the limitations, except for a thickness of the transparent conductive layer is within a range of 380 nm to 500 nm. Katsumoto teaches an organic light emitting diode device which includes a thickness of a transparent conductive layer is preferably from 30 nm to 500 nm, paragraph 140.

Claim 26 shares the same limitations as those of claim 25 and therefore the rationale for rejection will be the same.

Claim 27 shares the same limitations as those of claim 25 and therefore the rationale for rejection will be the same.

In the alternate embodiment, Cok discloses the cathode used in this invention is comprised of nearly any conductive material, col. 9, lines 37-38. Urabe's benefit provides a prescribed shape, which is obtained and performed a transparent conducting film that showed good conductively by forming as a film at a room temperature, which is used as the transparent conducting layer 12, col. 8, line 66 to col. 9, line 2. Urabe's benefit further is used in a display having large size and high resolution, col. 10, lines 10-15. Katsumoto's benefit provides a prescribed shape of the transparent conductive layer to be good conductively, paragraph 140.Thus, it would have been obvious to a person of ordinary skill in the art to apply Katsumoto to Cok and Urabe to achieve the predictable result. Using the known technique of Katsumoto would have been obvious to one of ordinary skill.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen M. Kevin whose telephone number is 571-272-7697. The examiner can normally be reached on MON-THU from 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin M. Nguyen/
Kevin M. Nguyen
Examiner
Art Unit 2629